The implementation of asthma guidelines in general practice

Producing asthma guidelines and publishing them in a scientific journal will alone achieve little. Their dissemination and implementation are the important actions, and these processes are now attracting increased scientific study.

Asthma management guidelines have been produced for nearly 10 yr and many have subsequently been updated regularly (1-5). The process involved in their production has varied from consensus conference to systematic literature review. Some which have been referred to as 'not evidence based' have actually involved considerable review of the literature and publication of extensive background papers prior to production of a summary document (3), but the process by which evidence has been reviewed has not always been clearly stated or understood (6). It also needs to be recognized that systematic review of the literature can be a costly process, and in future, attention needs to be directed at how the process can be made more dynamic such that it can incorporate the results of new studies or assess the impact of new therapies as and when they are introduced or published. It also needs to be appreciated that, even with systematic review of the published literature, well-constructed, randomized, controlled clinical trials can be interpreted differently by different 'experts'. There will also be gaps in the scientific literature and areas of controversy, and how these are tackled requires consideration. The correct mix of experts, clinicians and potential users of the guidelines is probably essential if scientifically valid, but relevant guidelines are to be produced.

Irrespective of the way in which the guidelines are constructed, they then need to be disseminated and implemented. Grimshaw and Russell reviewed the published evaluations of clinical guidelines in 1993, and showed that the majority revealed significant improvements in the process and outcome of care (7). They have subsequently reviewed dissemination and implementation (8). The former term refers to educational activities designed to increase clinicians' awareness, knowledge and understanding of guidelines, whilst implementation refers to interventions that turn changes in attitudes and knowledge into changes in medical practice. A fair summary of their extensive review of the subject would be that the greater the sense of relevance and ownership of guidelines by the users, the greater the targeting of the associated educational effort; and the more audit and reminder of guidelines that is available at the time of doctor/patient consultation, the greater the chance of a change in medical practice.

Grimshaw and Russell's review (7) was concerned with guidelines on the management of a variety of conditions. What specific activities and evaluations have there been of asthma guidelines, especially those of relevance to primary care? The British Asthma Guidelines were produced by a process of literature review and consensus with publication in a specialist journal (3). This was followed by the posting of the guidelines and summary charts to all relevant health professionals, and subsequent reinforcement mailings were undertaken and a series of regional postgraduate meetings were arranged. At these, half of the time was spent outlining the content of the guidelines, and the other half spent discussing local implementation strategies (audit, locality/practice based education etc.). Grimshaw and Russell's evaluations (7,8) would suggest that the dissemination project alone may have a low probability of altering medical behaviour.

Neville et al. have studied serially the management of acute asthma by colleagues in primary care. An audit of general practice management of acute asthma in 1991-92 (9) showed a significant gap between actual management and that recommended in guidelines (mainly underuse of systemic steroids and nebulized bronchodilators). By the time of a repeat audit in 1992-93, use of systemic steroids in acute attacks had increased from 56 to 71%, and an increase in prophylactic medication after an acute attack had increased from 41 to 49% (10). Reported management was closer to that outlined in the guidelines amongst practitioners belonging to the special interest 'G.P. in Asthma' group, but the authors correctly conclude that it is difficult to say which of many possibilities had the greatest impact on this minor improvement in care. However a special interest in a condition along with some other organizational aspects may have an effect on outcome. Such an interest and special facilities may be easier to introduce (especially across a range of conditions).
when groups of practitioners work together within one primary care facility. Thus, it has been shown that larger practices have lower admission rates of their patients with asthma to hospital than single-handed practices (11), and are more likely to employ practice nurses, use computers, have practice managers and undertake an audit (12). The recent undertaking of audit has been shown to be associated with improved asthma outcomes (13), and to be an important component of guidelines implementation. In an uncontrolled trial reported in this issue of the journal (14), improved outcomes, in terms of prescriptions paralleling the advice contained in guidelines, were shown to occur when patients were reviewed in an asthma clinic largely run by specialist asthma trained nurses. Similar improvements in the process of care have been demonstrated in a controlled study of the effect of a nurse-run clinic for patients with epilepsy in general practice (15).

In East London, Feder et al. developed local guidelines on asthma and diabetes (based on the British Thoracic Society guidelines and on the St. Vincents’ declaration), and offered participating general practices either three lunchtime educational sessions on asthma or three sessions on diabetes. The practitioners were also offered a stamp to be used in the notes when reviewing patients with asthma, and a stamp and booklet for reviewing diabetic patients. The stamp for asthma prompted the practitioner to ask about symptoms during the day, night and after exercise, time off school or work, and use of bronchodilators, and prompted them to record peak flows and to check inhaler technique. The diabetic ‘educated’ doctors also monitored patients’ asthma outcomes, and asthma ‘educated’ doctors also recorded diabetic outcomes.

Results showed that the ‘diabetic’ practices improved their recording of all variables compared with baseline, and the ‘asthma’ practices significantly improved their recording of inhaler techniques, smoking habits and symptoms compared to baseline. There was further improvement in doctors recording that they had reviewed inhaler techniques.

With regards to prescribing, there was a significantly increased rate of prescribing of prophylactic therapies in the asthma ‘educated’ group compared with both baseline and with the diabetes ‘educated’ group. This study shows that the production of local guidelines and their dissemination by peers, associated with some simple educational efforts, can improve both the process of care and its outcome within inner city primary care (16). The use of simple recording prompts enhances this process and leads to speculation that other methods of patient-specific reminders may be feasible in primary care. Usage of computers for a variety of functions is now widespread amongst general practitioners, and considerable research is underway in their use in facilitating decision making. Computerized decision support systems lend themselves to use in the primary care management of chronic asthma because of the step-wise management scheme proposed in the British Asthma Guidelines and because of the widespread use of objective peak flow monitoring. Such systems can be used not only to prompt practitioners at the time of consultations, but also to offer invaluable audit data to permit easier feedback and reinforcement of the guidelines.

In summary, guidelines are not protocols, or something to be feared. Instead of each clinician having to read hundreds of research papers, the work has been done for us by others and a summary of recommendations made. Guidelines should be regarded as a clinical tool to aid the busy clinician, but production alone will not produce health gains. This is only likely to occur if well-produced, scientifically valid guidelines are disseminated and then adapted and adopted locally by those who will use them so that there is a sense of ownership and local relevance. Simple practice-based education, combined with patient-specific reminders and audit, is then likely to improve both the process and outcome of care.

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References


